SA 11-18

GW Wells Monitoring Report
Third Quarter 1997

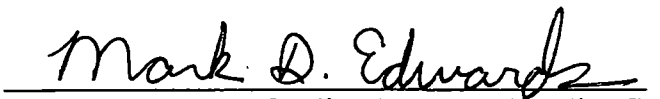
NEVADA GOLDFIELDS
McCormick, SC

SIGNATURE PAGE

This report, "Groundwater Sampling and Analytical Procedures Report for Third Quarter, 1997," has been prepared in accordance with accepted quality control practices at the request of and for the exclusive use of **NEVADA GOLDFIELDS** The report has been reviewed by the undersigned reviewers.

SHEALY ENVIRONMENTAL SERVICES, INC.

Michael A. Woodrum, Vice President of Analytical Services
October 7, 1997



Mark D. Edwards, Quality Assurance/Quality Control Manager
October 7, 1997

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GROUNDWATER SAMPLING AND ANALYTICAL PROCEDURES REPORT

Third Quarter 1997

NEVADA GOLDFIELDS, INC.
McCormick, SC

I. INTRODUCTION

This report describes the procedures followed by **SHEALY ENVIRONMENTAL SERVICES, INC.** (**SHEALY**) during the sampling and analysis of groundwater at **NEVADA GOLDFIELDS,** McCormick, SC. The report includes procedures for:

1. Sample collection
2. Sample preservation
3. Chain-of-Custody control
4. Analytical protocol

These procedures were developed by **SHEALY** to comply with the sampling procedures recommended by SCDHEC, the US Environmental Protection Agency (EPA), the Resource Conservation and Recovery Act (RCRA), Groundwater Monitoring Technical Enforcement Guidance Document (TEGD) (1986), and published research findings. The protocol described was designed to insure that the integrity of the samples were maintained in the field, during transit to the laboratory and throughout the analytical procedures.

I.A. MONITORING PARAMETERS AND FREQUENCY

The following wells were sampled during September 1997:

GW-2	GW-1	GW-3	Well P
Well K	Well J	Well H	Well I

These monitoring wells were analyzed for the following parameters:

* TDS	* Nitrate-N	* Nitrite-N	* Alkalinity	*Sulfate
*Chloride	*TOC	* Ammonia	* Cyanide	

* Metals: As,Hg,Se,Pb,Al,Ba,Cd,Ca,Cr,Cu,Fe,Mg,Mn,Ni,K,Ag,Na,Zn,Cu-Diss.

I.B. SAMPLING PROTOCOL

The procedures described below are intended to insure that representative groundwater samples are collected. Procedures for measurement of the water table depth, measurement of total well depth, well evacuation, and sample collection are included.

For each well, all data collected were recorded on a Field Data Information Sheet. Prior to the initiation of activities at each well, all sampling personnel put on new, laboratory quality PVC gloves. These gloves were replaced as necessary during the well evacuation and sampling procedure. Prior to the collection of any groundwater quality data at each well, the surface integrity of the well was checked. Any problems which could affect groundwater sample integrity were noted on the Field Data Information Sheet.

I.B.1. Water Level Measurement

Prior to the evacuation of each monitoring well, the depth to the water table was determined with the use of an electronic water level indicator. The water level indicator uses a sensitive circuitry to activate a buzzer when electrical continuity is made at the probe. The sensitivity is set so that waters with conductivities greater than approximately one umhos/cm will close the circuit. After use at each well, the instrument was cleaned according to the "Field Cleaning Procedures," which are described in Section I.C.1. The depth to the water table was measured by turning the instrument on and then slowly lowering the instrument probe into the well until the buzzer sounded. The distance from the measuring point of the well to the water level was then measured and recorded. The instrument was calibrated in 0.05 foot increments. All measurements were made and estimated to the nearest 0.01 foot.

I.B.2. Total Depth Measurement

The total depth measurement is used in calculating the volume of water standing in the well casing. The total well depth was taken from historical data.

I.B.3. Well Evacuation

The purpose of the well evacuation procedure is to initiate the introduction of water from the surrounding aquifer into which the well is placed. By removing standing water from the well, a hydraulic gradient is created which results in water from the surrounding aquifer into the well. The quality of this water is representative of the water quality immediately surrounding the well.

Well evacuation and sampling of all wells at the site were done using 1.66 inch outside diameter, three foot long Teflon or stainless steel bailers with a single bottom check valve. All bailers were cleaned at the laboratory prior to use, and a separate bailer was used for each well. When field cleaning was required, the method outlined in Section I.C.1. was used and new 1/8 inch nylon twine was used for each well.

The following steps were followed for evacuation with Teflon bailers:

1. The depth to the water table was subtracted from the total well depth to determine the length of the water column. The water column length was multiplied by the appropriate conversion factor for that particular well casing diameter to determine the volume, in gallons, of water standing in the well casing. This volume wasthen multiplied by three to calculate the standard evacuation volume.
2. The bailer was lowered to a depth just below the water level in the well each time to insure adequate evacuation of the standing water.
3. The pH and Specific Conductivity were measured and recorded periodically during well evacuation. For high yield wells, well evacuation continued until the standard evacuation volume was removed and both pH and Specific Conductivity were relatively stable. Stability of the pH is defined as two consecutive measurements varying by no more than 10 percent. All evacuated volumes and field measurements were recorded on the Field Data Information Sheet.

Wells which were evacuated to dryness prior to reaching the standard evacuation volume were sampled as soon as a sufficient volume of water had entered the well. Field parameters were measured prior to sample collection to insure water quality stability.

I.B.4. Sample Collection

The primary consideration during the collection of groundwater samples is to insure that the sample is not altered or contaminated during withdrawal from the well and introduction into the sample container.

A complete set of pre-cleaned and pre-labelled sample containers were removed from the cooler and slowly filled with fresh sample, poured directly from the bailer. Preservatives were added to the sample bottles prior to leaving for the sampling event. Care was taken to insure that the bailer did not contact the sample bottle during filling. The filled bottles were then capped and securely placed into the pre-cleaned cooler. The Chain of Custody Form, was then completed for that well. Finally, the well was re-capped and locked.

I.C. FIELD QUALITY CONTROL

A strict quality control program is followed in the field by **SHEALY** to insure that sample integrity is maintained during sample collection and transit to the laboratory. In addition, all equipment and instruments are carefully maintained and calibrated in accordance with schedules and procedures described in SHEALY's Quality Control Manual entitled "SOP and QA Manual for Groundwater Sampling".

I.C.1. Field Cleaning Procedures

All field equipment and instrumentation are cleaned at the laboratory according to standard laboratory procedures upon return from each sampling trip. Field equipment and instrumentation include: sample coolers, pH and Specific Conductivity meters, and field measurement vessels. If instrumentation and field equipment were used on more than one well, it was cleaned according to the following field cleaning procedures:

1. Rinse item thoroughly with a 5% phosphate-free laboratory detergent solution.
2. Rinse item with deionized water, twice.

I.C.2. Field Instruments and Measuring Devices

Instruments and devices used to collect field data at the **NEVADA GOLDFIELDS** facility include: pH and Specific Conductivity meters and an electronic water level indicator.

The pH and Specific Conductivity meters were calibrated in the field prior to sampling. The pH meter was calibrated using a 4 SU standard and a 10 SU standard. The Specific Conductivity meter was also calibrated in the field according to SHEALY's Field Operation SOP and the manufacturer's specifications. All calibration records for both meters are recorded in the appropriate calibration log books maintained at Shealy.

I.C.3. Field Blanks

One set of field blanks was collected during the sampling event. At that time, one set of bottles was randomly removed from the sample cooler and labelled as "Field Blank". The Field Blank was obtained by filling a laboratory cleaned bailer with deionized water. this water was then poured into the labeled sample bottles. The deionized water is also used to rinse field equipment. Once filled, the field blanks were treated as samples and placed in the sample cooler for transport to the laboratory. Field blanks and groundwater samples were analyzed for the same parameters in order to assure quality control during sampling, transportation, and analysis.

I.C.4. Field Data Information Sheet

All pertinent field information was recorded on the Field Data Information Sheet as it was collected. This information includes: date of sampling, name of collector, monitoring well number, casing diameter and material of construction, well integrity, measuring point elevation, total well depth, depth to groundwater, volume of water in casing, method of evacuation and sampling, total volume of water evacuated, field measurements with time and volume evacuated, and field observations. Information on the Field Data Information Sheets was reviewed upon arrival at the laboratory and pertinent information transferred to the Certificate of analysis and noted as field measurements.

I.C.5. Sample Transportation and Chain of Custody

The transportation of groundwater samples from the time of collection to their arrival at the laboratory is an important part of the groundwater monitoring program. The mode of travel must be such that the sample is not altered physically, chemically, or biologically. The travel time to the laboratory must not interfere with the sample holding time. The Chain of Custody must also be maintained during the transportation process. Samples collected at the **NEVADA GOLDFIELDS** facility remained in the possession of **SHEALY** personnel and were transported to the laboratory within the allowed holding time of all the required parameters. Custody is defined as:

1. Being in one's physical possession.
2. Being in one's view, after being in one's possession.
3. Being in a designated secure area.

Upon arrival at the laboratory, the sampling personnel relinquished the samples to the laboratory sample custodian. This transaction was documented on the Chain of Custody Form.

Reviewed By: Milton P. Quattlebaum — 6 OCT 97

Milton P. Quattlebaum
Field Service Supervisor

Date

II. ANALYTICAL PROTOCOL

The analytical protocols used at SHEALY to insure that groundwater quality at the **NEVADA GOLDFIELDS** facility was accurately detected and quantified were taken two EPA sources, Methods for Chemical Analyses of Water and Wastes and Test Methods for Evaluation Solid Waste. The analysis for metals was for the total recoverable fraction. Laboratory Quality Control/Quality Assurance procedures are presented in detail in the SHEALY's SOP Manuals.

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

106 VANTAGE POINT DRIVE
CAYCE, SOUTH CAROLINA 29033

(803) 791-9700
FAX (803) 791-9111

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 **NC DEHNR No. 329**

Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118349
Description: GW-2

Coll. Date: 09/22/97
Coll. Time: 1105

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer mac

V.P. Analytical

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		28.2	ft.		09/22/97	MPQ
Water Level Depth From Top of Casing		23.83	ft.		09/22/97	MPQ
pH-Field at 17.3 C	150.1	3.99	SU		09/22/97	MPQ
Specific Conductance at 25 C - Field	120.1	560	umhos/cm		09/22/97	MPQ
Temperature-Field	170.1	17.3	C		09/22/97	MPQ
INORGANICS						
Alkalinity-Bicarbonate	SM 4500D	52.8	mg/l		10/05/97	NWD
Ammonia-N	350.3	0.707	mg/l		09/24/97	CMK
Chloride	300.0	5.15	mg/l		09/25/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	<0.020	mg/l		09/24/97	JPS
Nitrite-N	354.1	0.046	mg/l		09/24/97	JPS
Sulfate	300.0	602	mg/l		09/30/97	RED
TOC	415.1	1.1	mg/l		09/26/97	MAC
TDS	160.1	648	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	6.63	mg/l	10/02/97	10/03/97	FT
Arsenic	206.2	<0.005	mg/l	09/30/97	10/06/97	FT
Barium	200.7	0.16	mg/l	10/02/97	10/03/97	FT
Cadmium	200.7	0.056	mg/l	10/02/97	10/03/97	FT
Calcium	200.7	28.4	mg/l	10/02/97	10/03/97	FT
Chromium	200.7	<0.010	mg/l	10/02/97	10/03/97	FT
Copper	200.7	8.21	mg/l	10/02/97	10/03/97	FT
Iron	200.7	86.8	mg/l	10/02/97	10/03/97	FT
Lead	239.2	0.009	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	7.65	mg/l	10/02/97	10/03/97	FT
Manganese	200.7	1.05	mg/l	10/02/97	10/03/97	FT
Mercury	245.1	<0.0001	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	0.054	mg/l	10/02/97	10/03/97	FT
Potassium	200.7	2.70	mg/l	10/02/97	10/03/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Sodium	200.7	13.2	mg/l	10/02/97	10/03/97	FT
Zinc	200.7	2.48	mg/l	10/02/97	10/03/97	FT
Dissolved Copper	200.7	7.04	mg/l	10/02/97	10/03/97	FT

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SC DHEC No. 32010 **NC DEHNR No. 329**

Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118350
Description: GW-1

Coll. Date: 09/22/97
Coll. Time: 1045

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		36.95	ft.		09/22/97	MPQ
Water Level Depth From Top of Casing		25.22	ft.		09/22/97	MPQ
pH-Field at 17.2 C	150.1	5.44	SU		09/22/97	MPQ
Specific Conductance at 25 C - Field	120.1	224	umhos/cm		09/22/97	MPQ
Temperature-Field	170.1	17.2	C		09/22/97	MPQ
INORGANICS						
Alkalinity-Bicarbonate	SM 4500D	16.0	mg/l		10/05/97	NWD
Ammonia-N	350.3	0.804	mg/l		09/24/97	CMK
Chloride	300.0	5.73	mg/l		09/25/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	0.747	mg/l		09/24/97	JPS
Nitrite-N	354.1	0.033	mg/l		09/24/97	JPS
Sulfate	300.0	115	mg/l		09/30/97	RED
TOC	415.1	8.3	mg/l		09/26/97	MAC
TDS	160.1	180	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	7.32	mg/l	09/30/97	10/03/97	FT
Arsenic	206.2	<0.005	mg/l	10/02/97	10/06/97	FT
Barium	200.7	0.096	mg/l	10/02/97	10/03/97	FT
Cadmium	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Calcium	200.7	5.69	mg/l	10/02/97	10/03/97	FT
Chromium	200.7	<0.010	mg/l	10/02/97	10/03/97	FT
Copper	200.7	0.129	mg/l	10/02/97	10/03/97	FT
Iron	200.7	19.0	mg/l	10/02/97	10/03/97	FT
Lead	239.2	0.004	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	6.57	mg/l	10/02/97	10/03/97	FT
Manganese	200.7	0.618	mg/l	10/02/97	10/03/97	FT
Mercury	245.1	0.0010	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	0.018	mg/l	10/02/97	10/03/97	FT
Potassium	200.7	1.76	mg/l	10/02/97	10/03/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Sodium	200.7	27.9	mg/l	10/02/97	10/03/97	FT
Zinc	200.7	0.493	mg/l	10/02/97	10/03/97	FT
Dissolved Copper	200.7	0.125	mg/l	10/02/97	10/03/97	FT

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 **NC DEHNR No. 329**

Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118351
Description: GW-3

Coll. Date: 09/22/97
Coll. Time: 1205

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer MAC

V.P. Analytical MAC

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		22.93	ft.		09/22/97	MPQ
Water Level Depth From Top of Casing		10.89	ft.		09/22/97	MPQ
pH-Field at 18.2 C	150.1	7.44	SU		09/22/97	MPQ
Specific Conductance at 25 C - Field	120.1	254	umhos/cm		09/22/97	MPQ
Temperature-Field	170.1	18.2	C		09/22/97	MPQ
INORGANICS						
Alkalinity-Bicarbonate	SM 4500D	15.1	mg/l		10/05/97	NWD
Ammonia-N	350.3	0.367	mg/l		10/01/97	CMK
Chloride	300.0	4.24	mg/l		09/25/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	<0.020	mg/l		09/24/97	JPS
Nitrite-N	354.1	0.084	mg/l		09/24/97	JPS
Sulfate	300.0	57.1	mg/l		09/30/97	RED
TOC	415.1	<1.0	mg/l		09/26/97	MAC
TDS	160.1	212	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	42.2	mg/l	10/02/97	10/03/97	FT
Arsenic	206.2	<0.005	mg/l	09/30/97	10/06/97	FT
Barium	200.7	0.088	mg/l	10/02/97	10/03/97	FT
Cadmium	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Calcium	200.7	24.2	mg/l	10/02/97	10/03/97	FT
Chromium	200.7	0.056	mg/l	10/02/97	10/03/97	FT
Copper	200.7	0.199	mg/l	10/02/97	10/03/97	FT
Iron	200.7	61.1	mg/l	10/02/97	10/03/97	FT
Lead	239.2	0.008	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	55.3	mg/l	10/02/97	10/03/97	FT
Manganese	200.7	3.17	mg/l	10/02/97	10/03/97	FT
Mercury	245.1	<0.0001	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	0.043	mg/l	10/02/97	10/03/97	FT
Potassium	200.7	0.528	mg/l	10/02/97	10/03/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Sodium	200.7	13.7	mg/l	10/02/97	10/03/97	FT
Zinc	200.7	0.523	mg/l	10/02/97	10/03/97	FT
Dissolved Copper	200.7	0.125	mg/l	10/02/97	10/03/97	FT

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Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118352
Description: Well P

Coll. Date: 09/22/97
Coll. Time: 1300

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer MAC

V.P. Analytical MA

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		89.70	ft.		09/22/97	MPQ
Water Level Depth From Top of Casing		74.67	ft.		09/22/97	MPQ
pH-Field at 18.7 C	150.1	7.24	SU		09/22/97	MPQ
Specific Conductance at 25 C - Field	120.1	126	umhos/cm		09/22/97	MPQ
Temperature-Field	170.1	18.7	C		09/22/97	MPQ
INORGANICS						
Alkalinity-Bicarbonate	SM 4500D	53.6	mg/l		10/05/97	NWD
Ammonia-N	350.3	0.123	mg/l		10/01/97	CMK
Chloride	300.0	3.67	mg/l		09/26/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	0.043	mg/l		09/24/97	JPS
Nitrite-N	354.1	<0.020	mg/l		09/24/97	JPS
Sulfate	300.0	4.59	mg/l		09/25/97	RED
TOC	415.1	<1.0	mg/l		09/26/97	MAC
TDS	160.1	108	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	7.24	mg/l	10/02/97	10/03/97	FT
Arsenic	206.2	<0.005	mg/l	09/30/97	10/06/97	FT
Barium	200.7	0.022	mg/l	10/02/97	10/03/97	FT
Cadmium	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Calcium	200.7	7.16	mg/l	0/02/97	10/03/97	FT
Chromium	200.7	0.042	mg/l	10/02/97	10/03/97	FT
Copper	200.7	0.032	mg/l	10/02/97	10/03/97	FT
Iron	200.7	15.3	mg/l	10/02/97	10/03/97	FT
Lead	239.2	0.010	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	13.4	mg/l	10/02/97	10/03/97	FTS
Manganese	200.7	0.794	mg/l	10/02/97	10/03/97	FT
Mercury	245.1	0.0002	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	0.021	mg/l	10/02/97	10/03/97	FT
Potassium	200.7	0.406	mg/l	10/02/97	10/03/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Sodium	200.7	13.7	mg/l	10/02/97	10/03/97	FT
Zinc	200.7	0.602	mg/l	10/02/97	10/03/97	FT
Dissolved Copper	200.7	0.017	mg/l	10/02/97	10/03/97	FT

SHEALY ENVIRONMENTAL SERVICES, INC.

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 **NC DEHNR No. 329**

Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118353
Description: Well K

Coll. Date: 09/22/97
Coll. Time: 1335

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		82.75	ft.		09/22/97	MPQ
Water Level Depth From Top of Casing		62.44	ft.		09/22/97	MPQ
pH-Field at 19.4 C	150.1	7.36	SU		09/22/97	MPQ
Specific Conductance at 25 C - Field	120.1	95	umhos/cm		09/22/97	MPQ
Temperature-Field	170.1	19.4	C		09/22/97	MPQ
INORGANICS						
Alkalinity-Bicarbonate	SM 4500D	34.1	mg/l		10/05/97	NWD
Ammonia-N	350.3	0.563	mg/l		10/01/97	CMK
Chloride	300.0	3.70	mg/l		09/25/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	0.105	mg/l		09/24/97	JPS
Nitrite-N	354.1	0.020	mg/l		09/24/97	JPS
Sulfate	300.0	4.12	mg/l		09/25/97	RED
TOC	415.1	<1.0	mg/l		09/26/97	MAC
TDS	160.1	72	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	48.9	mg/l	10/02/97	10/03/97	FT
Arsenic	206.2	<0.005	mg/l	09/30/97	10/06/97	FT
Barium	200.7	0.109	mg/l	10/02/97	10/03/97	FT
Cadmium	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Calcium	200.7	8.28	mg/l	10/02/97	10/03/97	FT
Chromium	200.7	0.115	mg/l	10/02/97	10/03/97	FT
Copper	200.7	0.141	mg/l	10/02/97	10/03/97	FT
Iron	200.7	98.5	mg/l	10/02/97	10/03/97	FT
Lead	239.2	0.012	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	40.4	mg/l	10/02/97	10/03/97	FT
Manganese	200.7	1.58	mg/l	10/02/97	10/03/97	FT
Mercury	245.1	<0.0001	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	0.229	mg/l	10/02/97	10/03/97	FT
Potassium	200.7	0.479	mg/l	10/02/97	10/03/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Sodium	200.7	8.90	mg/l	10/02/97	10/03/97	FT
Zinc	200.7	0.851	mg/l	10/02/97	10/03/97	FT
Dissolved Copper	200.7	0.050	mg/l	10/02/97	10/03/97	FT

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

106 VANTAGE POINT DRIVE
CAYCE, SOUTH CAROLINA 29033

(803) 791-9700
FAX (803) 791-9111

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 **NC DEHNR No. 329**

Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118354
Description: Well J

Coll. Date: 09/22/97
Coll. Time: 1425

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		65.80	ft.		09/22/97	MPQ
Water Level Depth From Top of Casing		61.25	ft.		09/22/97	MPQ
pH-Field at 18.5 C	150.1	6.67	SU		09/22/97	MPQ
Specific Conductance at 25 C - Field	120.1	69	umhos/cm		09/22/97	MPQ
Temperature-Field	170.1	18.5	C		09/22/97	MPQ
INORGANICS						
Alkalinity-Bicarbonate	SM 4500D	<10.0	mg/l		10/05/97	NWD
Ammonia-N	350.3	0.341	mg/l		10/01/97	CMK
Chloride	300.0	3.96	mg/l		09/25/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	0.451	mg/l		09/24/97	JPS
Nitrite-N	354.1	<0.020	mg/l		09/24/97	JPS
Sulfate	300.0	18.2	mg/l		09/25/97	RED
TOC	415.1	<1.0	mg/l		09/26/97	MAC
TDS	160.1	72	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	5.31	mg/l	10/02/97	10/03/97	FT
Arsenic	206.2	<0.005	mg/l	09/30/97	10/06/97	FT
Barium	200.7	0.040	mg/l	10/02/97	10/03/97	FT
Cadmium	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Calcium	200.7	2.13	mg/l	10/02/97	10/03/97	FT
Chromium	200.7	<0.010	mg/l	10/02/97	10/03/97	FT
Copper	200.7	0.118	mg/l	10/02/97	10/03/97	FT
Iron	200.7	23.6	mg/l	10/02/97	10/03/97	FT
Lead	239.2	0.004	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	3.89	mg/l	10/02/97	10/03/97	FT
Manganese	200.7	0.314	mg/l	10/02/97	10/03/97	FT
Mercury	245.1	<0.0001	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	<0.010	mg/l	10/02/97	10/03/97	FT
Potassium	200.7	0.393	mg/l	10/02/97	10/03/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/03/97	FT
Sodium	200.7	8.12	mg/l	10/02/97	10/03/97	FT
Zinc	200.7	0.112	mg/l	10/02/97	10/03/97	FT
Dissolved Copper	200.7	0.064	mg/l	10/02/97	10/03/97	FT

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

106 VANTAGE POINT DRIVE
CAYCE, SOUTH CAROLINA 29033

(803) 791-9700
FAX (803) 791-9111

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 **NC DEHNR No. 329**

Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118355
Description: Well H

Coll. Date: 09/22/97
Coll. Time: 1505

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		61.98	ft.		09/22/97	MPQ
Water Level Depth From Top of Casing		53.96	ft.		09/22/97	MPQ
pH-Field at 18.2 C	150.1	5.88	SU		09/22/97	MPQ
Specific Conductance at 25 C - Field	120.1	81	umhos/cm		09/22/97	MPQ
Temperature-Field	170.1	18.2	C		09/22/97	MPQ
INORGANICS						
Alkalinity	310.1	<10.0	mg/l		10/05/97	NWD
Ammonia-N	350.3	0.142	mg/l		10/01/97	CMK
Bicarbonate	SM 4500D	<10.0	mg/l		10/07/97	AC
Chloride	300.0	6.56	mg/l		09/25/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	1.72	mg/l		09/24/97	JPS
Nitrite-N	354.1	<0.020	mg/l		09/24/97	JPS
Sulfate	300.0	10.1	mg/l		09/25/97	RED
TOC	415.1	<1.0	mg/l		09/26/97	MAC
TDS	160.1	72	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	1.34	mg/l	10/02/97	10/06/97	FT
Arsenic	206.2	<0.005	mg/l	09/30/97	10/06/97	FT
Barium	200.7	0.028	mg/l	10/02/97	10/06/97	FT
Cadmium	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Calcium	200.7	1.60	mg/l	10/02/97	10/06/97	FT
Chromium	200.7	<0.010	mg/l	10/02/97	10/06/97	FT
Copper	200.7	0.065	mg/l	10/02/97	10/06/97	FT
Iron	200.7	7.89	mg/l	10/02/97	10/06/97	FT
Lead	239.2	0.009	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	0.819	mg/l	10/02/97	10/06/97	FT
Manganese	200.7	0.257	mg/l	10/02/97	10/06/97	FT
Mercury	245.1	<0.0001	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	<0.010	mg/l	10/02/97	10/06/97	FT
Potassium	200.7	0.243	mg/l	10/02/97	10/06/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Sodium	200.7	14.7	mg/l	10/02/97	10/06/97	FT
Zinc	200.7	0.080	mg/l	10/02/97	10/06/97	FT
Dissolved Copper	200.7	0.050	mg/l	10/02/97	10/06/97	FT

SHEALY ENVIRONMENTAL SERVICES, INC.

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106 VANTAGE POINT DRIVE
CAYCE, SOUTH CAROLINA 29033

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 **NC DEHNR No. 329**

Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118356
Description: Well I

Coll. Date: 09/22/97
Coll. Time: 1540

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		90.00	ft.		09/22/97	MPQ
Water Level Depth From Top of Casing		56.95	ft.		09/22/97	MPQ
pH-Field at 18.1 C	150.1	6.39	SU		09/22/97	MPQ
Specific Conductance at 25 C - Field	120.1	69	umhos/cm		09/22/97	MPQ
Temperature-Field	170.1	18.1	C		09/22/97	MPQ
INORGANICS						
Alkalinity-Bicarbonate	SM 4500D	<10.0	mg/l		10/05/97	NWD
Ammonia-N	350.3	0.273	mg/l		10/01/97	CMK
Chloride	300.0	8.79	mg/l		09/25/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	1.10	mg/l		09/24/97	JPS
Nitrite-N	354.1	<0.020	mg/l		09/24/97	JPS
Sulfate	300.0	9.43	mg/l		09/25/97	RED
TOC	415.1	1.5	mg/l		09/26/97	MAC
TDS	160.1	44	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	1.97	mg/l	10/02/97	10/06/97	FT
Arsenic	206.2	<0.005	mg/l	09/30/97	10/06/97	FT
Barium	200.7	0.027	mg/l	10/02/97	10/06/97	FT
Cadmium	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Calcium	200.7	2.11	mg/l	10/02/97	10/06/97	FT
Chromium	200.7	<0.010	mg/l	10/02/97	10/06/97	FT
Copper	200.7	0.011	mg/l	10/02/97	10/06/97	FT
Iron	200.7	2.14	mg/l	10/02/97	10/06/97	FT
Lead	239.2	0.003	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	2.53	mg/l	10/02/97	10/06/97	FT
Manganese	200.7	0.136	mg/l	10/02/97	10/06/97	FT
Mercury	245.1	0.0004	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	<0.010	mg/l	10/02/97	09/26/97	FT
Potassium	200.7	0.203	mg/l	10/02/97	09/26/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Sodium	200.7	10.7	mg/l	10/02/97	10/06/97	FT
Zinc	200.7	0.088	mg/l	10/02/97	10/06/97	FT
Dissolved Copper	200.7	<0.005	mg/l	10/02/97	10/06/97	FT

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

106 VANTAGE POINT DRIVE
CAYCE, SOUTH CAROLINA 29033

(803) 791-9700
FAX (803) 791-9111

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 **NC DEHNR No. 329**

Client: NEVADA GOLDFIELDS
P.O. Box 1510
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 118357FB
Description: Field Blank

Coll. Date: 09/22/97
Coll. Time: 1535

Date Received: 09/23/97
Date Reported: 10/07/97

QA/QC Officer MAC

V.P. Analytical MA

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
INORGANICS						
Alkalinity-Bicarbonate	SM 4500D	<10.0	mg/l		10/05/97	NWD
Ammonia-N	350.3	<0.100	mg/l		09/24/97	CMK
Chloride	300.0	<1.00	mg/l		09/25/97	RED
Cyanide-Total	335.2	<0.005	mg/l	09/26/97	09/29/97	CMK
Nitrate-N	353.2	<0.020	mg/l		09/24/97	JPS
Nitrite-N	354.1	<0.020	mg/l		09/24/97	JPS
Sulfate	300.0	<1.00	mg/l		09/25/97	RED
TOC	415.1	4.7	mg/l		09/26/97	MAC
TDS	160.1	<10	mg/l		09/24/97	JPS
METALS						
Aluminum	200.7	<0.050	mg/l	10/02/97	10/06/97	FT
Arsenic	206.2	<0.005	mg/l	09/30/97	10/06/97	FT
Barium	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Cadmium	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Calcium	200.7	<0.050	mg/l	10/02/97	10/06/97	FT
Chromium	200.7	<0.010	mg/l	10/02/97	10/06/97	FT
Copper	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Iron	200.7	0.076	mg/l	10/02/97	10/06/97	FT
Lead	239.2	<0.003	mg/l	09/29/97	10/03/97	FT
Magnesium	200.7	<0.050	mg/l	10/02/97	10/06/97	FT
Manganese	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Mercury	245.1	<0.0001	mg/l	09/25/97	09/26/97	RZ
Nickel	200.7	<0.010	mg/l	10/02/97	10/06/97	FT
Potassium	200.7	<0.200	mg/l	10/02/97	10/06/97	FT
Selenium	270.2	<0.005	mg/l	09/30/97	10/06/97	FT
Silver	200.7	<0.005	mg/l	10/02/97	10/06/97	FT
Sodium	200.7	<0.100	mg/l	10/02/97	10/06/97	FT
Zinc	200.7	0.061	mg/l	10/02/97	10/06/97	FT
Dissolved Copper	200.7	<0.005	mg/l	10/02/97	10/06/97	FT

DEPTH TO GROUNDWATER SUMMARY

NEVADA GOLDFIELDS
McCormick, SC

WELL NUMBER	DGW (feet)
Well H	53.96
Well I	56.95
Well J	61.25
Well K	62.44
Well P	74.67
GW-1	25.22
GW-2	23.83
GW-3	10.89

USE BALL POINT PEN ONLY, PRESS HARD

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Pointe Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

CHAIN OF CUSTODY RECORD

SAMPLE ANALYSIS REQUIRED

CHAIN OF CUSTODY #

Client Name Nevada Goldfields

Reporting Address McCormick, SC

Attention

Telephone No. P.O. No.

NPDES #

County

Receiving Stream

Outfall No.

Sample ID (Location)	Yr. 97 DATE	TIME	WELL	SOLID	COMP	GRAB	# of containers	pH, Conductivity	BOD	C Nutrients - Specify	B/E METALS - Specify	TOC/TOX - Specify	BTEX	VOC - Specify Method required	Pesticides/PCBs - Specify	Herbicides	Total Phenol	Oil & Grease	BNAs	Solids - Specify	J Cyanide	Coliform - Specify type	Toxicity - Specify	E General	REMARKS	SESI LAB I.D.
GW-2	Start 9-22 Finish	1105	X				5			X	2 X										X			X	Filter for Diss. Metals in Lab.	118349
GW-1	Start 9-22 Finish	1045	X				5			X	2 X										X			X	General TDS NO3 NO2 Alk	118350
GW-3	Start 9-22 Finish	1205	X				5			X	2 X										X			X	Bromb SO4 Cl ~~NH3~~ NH3 TOC	118351
Well P	Start 9-22 Finish	1300	X				5			X	2 X										X			X		118352
Well K	Start 9-22 Finish	1335	X				5			X	2 X										X			X	Metals As Hg Se Pb(GF) DW All Ba Cd Ca Cr Cu Fe	118353
Well J	Start 9-22 Finish	1425	X				5			X	2 X										X			X	mg Mn Ni K Ag Na Zn 22 Cu-Dissolved	118354
Well H	Start 9-22 Finish	1505	X				5			X	2 X										X			X		118355
Well I	Start 9-22 Finish	1540	X				5			X	2 X										X			X		118356

←PRESERVATION (CODE)

CODE: A = None
B = HNO3
C = H2SO4
D = NaOH
E = ICE
F = _____

LAB USE ONLY

Program Area (Circle) ~~CWA/NPDES~~
DW CWA/NPDES
RCRA SP/SOL
SP/LIQ Other:_____

SAMPLER	Date/Time	Received by (Sig.)	Date/Time	Hazards Associated with Sample	Custody Seal Intact (Circle)
Print Name: Chris Hinson Signature:				From secure area CT Cayetano 0830 Ice melted	YES NO NONE Receipt TRC _____ mg/l Receipt pH _____ su Receipt Temp. _____ °C Received on Ice (Circle) YES NO ICE PACK
Relinquished by (Sig.)	Date/Time	Received by (Sig.)	Date/Time		
Relinquished by (Sig.)	Date/Time 9-22-97 1825	Lab Receipt by (Sig.) Secure Area	Date/Time 9-22-97 1825		

White Copy: Sampler — Yellow Copy: Shealy — Pink Copy: Report

AMERICAN SYSTEMS, COLUMBIA, S.C.

USE BALL POINT PEN ONLY, PRESS HARD

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Pointe Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

CHAIN OF CUSTODY RECORD

SAMPLE ANALYSIS REQUIRED

CHAIN OF CUSTODY #

Client Name: Nevada Goldfields

Reporting Address: McCormick, SC

Attention:

Telephone No.: P.O. No.:

NPDES #:

County:

Receiving Stream:

Outfall No.:

←PRESERVATION (CODE)
CODE: A = None, B = HNO3, C = H2SO4, D = NaOH, E = ICE, F =

LAB USE ONLY
Program Area (Circle): DW, CWA/NPDES (circled), RCRA, SP/SOL, SP/LIQ, Other:

Sample ID (Location)	Yr. 97 DATE	TIME	WELL	SOLID	COMP	GRAB	# of containers	pH, Conductivity	BOD	Nutrients - Specify (C)	METALS - Specify (B/E)	TOC/TOX - Specify	BTEX	VOC - Specify Method required	Pesticides/PCBs - Specify	Herbicides	Total Phenol	Oil & Grease	BNAs	Solids - Specify	Cyanide (D)	Coliform - Specify Type	Toxicity - Specify	General (E)			REMARKS	SESI LAB I.D.
Field Blank	Start 9-22 / Finish	1535				X	5			X	2 X										X			X			Filter for Diss. Metals in Lab	118357FB
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											

SAMPLER	Date/Time	Received by (Sig.)	Date/Time	Hazards Associated with Sample	Custody Seal Intact (Circle)
Print Name: Chris Hinson Signature: [signature]				From secure area CT Cayetano ice melted	YES NO NONE Receipt TRC ____ mg/l Receipt pH ____ su Receipt Temp. ____ °C
Relinquished by (Sig.)	Date/Time	Received by (Sig.)	Date/Time		
Relinquished by (Sig.) [signature]	Date/Time 9-22-97 1825	Lab Receipt by (Sig.) Secure Area	Date/Time 9-22-97 1825		Received on Ice (Circle): YES (circled) NO ICE PACK

White Copy: Sampler Yellow Copy: Shealy Pink Copy: Report

AMERICAN SYSTEMS, COLUMBIA, S.C.

Field Data Information Sheet For Groundwater Sampling

Page 1 of 8

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**SEPTEMBER 22, 1997**	Casing Diameter: 2 inches	Casing Material: (PVC) Metal
Field Personnel	**CWH, MPQ**	Guard Pipe: PVC (Metal) No	Locking Cap: (Y) N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y -(N)	Integrity Satisfactory: (Y) N
Well ID #	Well H	Well Yield: Low -(Mod)- High	
Weather Conditions	Overcast Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	61.98	Extra volume purged to allow pH	
Depth To Groundwater (DGW) =	53.96	to stabilize.	
Length Of Water Column (LWC) =	8.02		
1 Casing Volume (OCV) = LWC x .163 =	1.31 gal.		
3 Casing Volumes =	3.93 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	5.24 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters
1.5" = 0.092
2" = 0.163
3" = 0.367
4" = 0.652
5" = 1.02
6" = 1.47
7" = 2.00
8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	0	1.31	2.62	3.93	5.24	WELL SAMPLE TIME: 1505
TIME (24 HOUR SYSTEM)	1443	1446	1451	1454	1459	Remarks:
pH (SU)	6.43	6.50	6.29	5.94	5.88	
WATER TEMPERATURE (°C.)	20.9	19.0	19.0	18.3	18.2	
SP. CONDUCTIVITY (UMHOS/CM)	80	80	75	75	70 → 81	
TURBIDITY (SUBJECTIVE)*	1	1	1	1	2	
ODOR (SUBJECTIVE)**	1	1	1	1	1	

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Field Data Information Sheet For Groundwater Sampling

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**SEPTEMBER 22, 1997**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**CWH, MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) - N	Integrity Satisfactory: (Y) - N
Well ID #	Well I	Well Yield: Low - Mod. - (High)	
Weather Conditions	Overcast Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	90.00		
Depth To Groundwater (DGW) =	56.95		
Length Of Water Column (LWC) =	33.05		
1 Casing Volume (OCV) = LWC x	.163 = 5.39 gal.		
3 Casing Volumes =	16.17 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	16.17 gal.		
Method of Well Evacuation	TB SSB WW (GP) Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters
1.5" = 0.092 5" = 1.02
2" = 0.163 6" = 1.47
3" = 0.367 7" = 2.00
4" = 0.652 8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	0	5.39	10.78	16.17		WELL SAMPLE TIME: 1540
TIME (24 HOUR SYSTEM)	1523	1525	1527	1529		Remarks:
pH (SU)	6.50	6.42	6.33	6.39		Field Blank / 1535
WATER TEMPERATURE (°C.)	19.4	18.8	18.2	18.1		
SP. CONDUCTIVITY (UMHOS/CM)	90	65	60	60 → 69		
TURBIDITY (SUBJECTIVE)*	1	2	2	2		
ODOR (SUBJECTIVE)**	1	1	1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Field Data Information Sheet For Groundwater Sampling

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Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**SEPTEMBER 22, 1997**	Casing Diameter: 2 inches	Casing Material: (PVC) Metal
Field Personnel	**CWH, MPQ**	Guard Pipe: PVC (Metal) No	Locking Cap: (Y) N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) N	Integrity Satisfactory: (Y) N
Well ID #	Well J	Well Yield: (Low) Mod. - High	
Weather Conditions	Overcast Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	65.80	Well dry at 1 gal.	
Depth To Groundwater (DGW) =	61.25		
Length Of Water Column (LWC) =	4.55		
1 Casing Volume (OCV) = LWC x	.163 = 0.75 gal.		
3 Casing Volumes =	2.25 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	1.00 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	0	0.75	1.50	2.25		WELL SAMPLE TIME: 1425
TIME (24 HOUR SYSTEM)	1410	1412				Remarks:
pH (SU)	6.70	6.67				
WATER TEMPERATURE (°C.)	21.6	18.5				
SP. CONDUCTIVITY (UMHOS/CM)	50	60	769			
TURBIDITY (SUBJECTIVE)*	1	2				
ODOR (SUBJECTIVE)**	1	1				

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Field Data Information Sheet For Groundwater Sampling

Page 4 of 8

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**SEPTEMBER 22, 1997**	Casing Diameter: 2 inches	Casing Material: (PVC) Metal
Field Personnel	**CWH, MPQ**	Guard Pipe: PVC - (Metal) No	Locking Cap: (Y) N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) - N	Integrity Satisfactory: (Y) - N
Well ID #	Well K	Well Yield: (Low) Mod. - High	
Weather Conditions	Overcast Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	82.75	Well dry at 3.31 gal.	
Depth To Groundwater (DGW) =	62.44		
Length Of Water Column (LWC) =	20.31		
1 Casing Volume (OCV) = LWC x	.163 = 3.31 gal.		
3 Casing Volumes =	9.93 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	3.31 gal.		
Method of Well Evacuation	TB SSB WW (GP) Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters
1.5" = 0.092
2" = 0.163
3" = 0.367
4" = 0.652
5" = 1.02
6" = 1.47
7" = 2.00
8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	0	3.31	6.62	9.93	
TIME (24 HOUR SYSTEM)	1314	1318			
pH (SU)	7.27	7.36			
WATER TEMPERATURE (°C.)	20.1	19.4			
SP. CONDUCTIVITY (UMHOS/CM)	90	85 → 795			
TURBIDITY (SUBJECTIVE)*	3	3			
ODOR (SUBJECTIVE)**	1	1			

WELL SAMPLE TIME: 1335

Remarks:

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Field Data Information Sheet For Groundwater Sampling

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Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**SEPTEMBER 22, 1997**	Casing Diameter: 2 inches	Casing Material: (PVC) Metal
Field Personnel	**CWH, MPQ**	Guard Pipe: PVC (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: (Y) - N
Well ID #	Well P	Well Yield: Low - (Mod) - High	
Weather Conditions	Overcast Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	89.70		
Depth To Groundwater (DGW) =	74.67		
Length Of Water Column (LWC) =	15.03		
1 Casing Volume (OCV) = LWC x	.163 = 2.45 gal.		
3 Casing Volumes =	7.35 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	7.35 gal.		
Method of Well Evacuation	TB SSB WW (GP) Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	0	2.45	4.90	7.35	
TIME (24 HOUR SYSTEM)	1239	1240	1242	1245	
pH (SU)	6.67	6.73	7.26	7.24	
WATER TEMPERATURE (°C.)	20.6	19.1	18.6	18.7	
SP. CONDUCTIVITY (UMHOS/CM)	115	115	110	110	7/26
TURBIDITY (SUBJECTIVE)*	2	2	2	1	
ODOR (SUBJECTIVE)**	1	1	1	1	

WELL SAMPLE TIME: 1300

Remarks:

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Field Data Information Sheet For Groundwater Sampling

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Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**SEPTEMBER 22, 1997**	Casing Diameter: 4 inches	Casing Material: (PVC) - Metal
Field Personnel	**CWH, MPQ**	Guard Pipe: PVC (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y (N)	Integrity Satisfactory: (Y) - N
Well ID #	GW-1	Well Yield (Low) - Mod. - High	
Weather Conditions	Overcast Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	36.95	Well dry at 11 gal.	
Depth To Groundwater (DGW) =	25.22		
Length Of Water Column (LWC) =	11.73		
1 Casing Volume (OCV) = LWC x	.652 = 7.65 gal.		
3 Casing Volumes =	22.95 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	11.00 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	0	7.65	11.00			WELL SAMPLE TIME:
TIME (24 HOUR SYSTEM)	1023	1031	1035			Remarks:
pH (SU)	5.20	5.37	5.44			
WATER TEMPERATURE (°C.)	17.5	17.2	17.2			
SP. CONDUCTIVITY (UMHOS/CM)	170	160	190 → 224			
TURBIDITY (SUBJECTIVE)*	1	2	3			
ODOR (SUBJECTIVE)**	1	1	1			

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Field Data Information Sheet For Groundwater Sampling

Page 7 of 8

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**SEPTEMBER 22, 1997**	Casing Diameter: 4 inches	Casing Material: (PVC) - Metal
Field Personnel	**CWH, MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: (Y) - N
Well ID #	GW-2	Well Yield: (Low) - Mod. - High	
Weather Conditions OVERCAST	Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	28.20	Well dry after 1st volume	
Depth To Groundwater (DGW) = ~~28.83~~	23.83		
Length Of Water Column (LWC) =	4.37		
1 Casing Volume (OCV) = LWC x 0.652	= 2.8 gal.		
3 Casing Volumes = 8.4	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	2.8 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other		
Method of Sample Collection	(TB) SSB WW GP Other		

Evacuation and Collection Methods	Constants for Casing Diameters	
TB - Teflon Bailer	1.5" = 0.092	5" = 1.02
SSB - Stainless Steel Bailer	2" = 0.163	6" = 1.47
WW - Well Wizard	3" = 0.367	7" = 2.00
GP - Grunfos Pump	4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	2.80				WELL SAMPLE TIME: 1105
TIME (24 HOUR SYSTEM)	1004	1007				Remarks:
pH (SU)	3.93	3.99				
WATER TEMPERATURE (°C.)	17.9	17.3				
SP. CONDUCTIVITY (UMHOS/CM)	470	475 → 760				
TURBIDITY (SUBJECTIVE)*	1	2				
ODOR (SUBJECTIVE)**	1	2				

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Field Data Information Sheet For Groundwater Sampling

Page 8 of 8

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**SEPTEMBER 22, 1997**	Casing Diameter: 4 inches	Casing Material: (PVC) - Metal
Field Personnel	**CWH, MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: (Y) - N
Well ID #	GW-3	Well Yield (Low) - Mod. - High	
Weather Conditions	Overcast Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	22.93	Well dry at 10 gal.	
Depth To Groundwater (DGW) =	10.89		
Length Of Water Column (LWC) =	12.04		
1 Casing Volume (OCV) = LWC x .652 =	7.85 gal.		
3 Casing Volumes =	23.55 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	10.00 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters
1.5" = 0.092
2" = 0.163
3" = 0.367
4" = 0.652
5" = 1.02
6" = 1.47
7" = 2.00
8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	0	7.85	10.00			WELL SAMPLE TIME: 1205
TIME (24 HOUR SYSTEM)	1136	1147	1150			Remarks:
pH (SU)	7.57	7.39	7.44			
WATER TEMPERATURE (°C.)	18.6	18.4	18.2			
SP. CONDUCTIVITY (UMHOS/CM)	230	215	220	→254		
TURBIDITY (SUBJECTIVE)*	3	3	3			
ODOR (SUBJECTIVE)**	1	1	1			

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ANALYTICAL METHODOLOGY

NEVADA GOLDFIELDS
McCormick, SC

PARAMETER	EPA METHOD
TDS	160.1
Nitrate	353.2
Nitrite	354.1
Alkalinity	310.1
Ammonia-N	350.3
Chloride	300.0
Sulfate	300.0
TOC	415.1
Cyanide	335.2
Metals: Arsenic	206.2
Metals: Lead	239.2
Metals: Selenium	270.2
Metals: Mercury	245.1
Diss. Metals	200.7
Total Metals (All others)	200.7